

FREQUENTLY ASKED QUESTIONS

California's Cool Cars Regulation

Reducing greenhouse gas emissions by making cars cooler and air conditioners work less

On June 25, 2009, the Air Resources Board (ARB) adopted the Cool Cars Regulation. This regulation requires new vehicles starting with the 2012 model year to be equipped with solar control windows. These windows would limit the amount of solar radiation entering the vehicle, allowing the air conditioning units to be downsized or used less frequently. Less air conditioning use or smaller air conditioning units translates into less fuel burned and lower greenhouse gas emissions emitted by the vehicle. Staff estimates that when the Cool Cars requirements are fully implemented they will prevent over 1 million metric tons of CO₂ from being emitted into the air.

Stakeholders have raised the concern that the current technology to meet the requirements may interfere with on-board electronic devices such as cell phones, global positioning systems (GPS), etc. ARB staff has conducted a small test plan to evaluate the impact of solar control windows on these devices and plans to post the final report on this test plan in the near future at www.arb.ca.gov/cc/cool-cars/cool-cars.htm. In addition, this "Frequently Asked Questions" sheet has been prepared by ARB staff to address questions regarding possible effects of reflective glazing on electronic devices as well as other questions pertaining to the Cool Cars regulation

Will I still be able to make a phone call from my car in case of emergencies?

Yes. The concern over whether cell phones will work properly is related to the use of reflective glass which will likely be used by vehicle manufacturers to comply with the regulation. However, through the 2015 model year (tier 1 of the regulation), only the windshield will likely be reflective. The remaining windows will be subject to less stringent requirements which will allow the use of non-reflecting glass. Thus cell phone use should not be impacted. Starting with the 2016 model year (tier 2 of the regulation), a performance-based standard will be in place, whereby a manufacturer may choose a variety of technologies (including the type of glass), so long as a performance standard is met. ARB envisions that the use of reflecting glass for the windshield will continue to be used but it is uncertain whether reflective glass will need to be used all-around. Nevertheless, ARB staff looked into this further and assessed the impact of all-around reflective glass. Specifically, ARB staff conducted a test program in Southern California involving three cars, one with reflective glass all-around, one with reflective glass only on the windshield, and one with no reflective glass at all. The study showed that cell phone performance was equivalent, regardless of how much reflective glass was used.

Will reflective windows interfere with the Department of Corrections' ability to monitor sex offenders who must wear GPS ankle bracelets?

No. ARB staff conducted a test program with the Department of Corrections and found that the ability to track people using GPS ankle bracelets was not affected by the use of reflective glass. The GPS ankle bracelets worked equally as well in cars with no reflective glass, cars equipped with a reflective windshield only, and cars equipped with reflective glass all-around.

Will my GPS still work?

Yes. Many automobile manufacturers currently equip their vehicles with external antennas to ensure proper functioning of factory installed GPS devices. For aftermarket GPS devices, deletion windows, or areas without reflective coatings, will be created in the windshield and the location of these windows noted in the owner's manual. ARB tests showed that placing the GPS device or the external antenna within the deletion window allows the device to operate as effectively as in a car with no reflective glass.

Will my FasTrak transponder (toll tag) work through reflective glass?

If the vehicle is equipped with a reflective glass windshield, transponders will work as long as the device is placed within the deletion window. Locations of all deletion windows will be indicated in your vehicle owner's manual.

Will E911 service on my cell phone be compromised by reflective glass?

E911 uses a combination of cell phone and GPS technology to direct emergency personnel to your location. Although ARB staff did not test E911 technology directly, cell phone and GPS navigation technology were tested separately and found to work in vehicles with reflective glass. As a result, staff does not expect E911 to be adversely affected by the Cool Cars regulation.

Will garage door openers still work through reflective glass?

If the vehicle is equipped with a reflective glass windshield, garage door openers will work as long as the device is placed within or pointed through a deletion window. Locations of all deletion windows will be indicated in your vehicle owner's manual.

How will this affect vehicles that have plastic windows, such as the Jeep Wrangler with soft top?

The Cool Cars regulation only applies to rigid windows and will not affect the flexible glazing on vehicles such as the Jeep Wrangler. If the plastic windows are rigid, they must comply with the same standards as glass windows, beginning with the 2012 model year.

Will non-compliant vehicles be banned from sale in California?

New vehicles sold in California will need to comply, beginning with the 2012 model year. Used 49-state vehicles may still be brought into California, whether or not they comply with the Cool Cars regulation, just as is the case for current used vehicles.

Will the regulation make windows darker?

No. The material used to prevent heat from entering the vehicle is not visible to the naked eye and is not the same as window tint. Automobile manufacturers may choose to comply with the regulation by making rooflights (sunroofs) darker, but visibility of the rest of the windows will not be affected.

Will windows under the regulation be heavier, or thicker?

No. For the first tier of the regulation starting in 2012, only the windshield will likely use reflective glazing. Reflective glazing currently requires the window to be laminated for durability, but windshields are already laminated for safety reasons. As a result, no change will need to be made to windshield construction in order to comply with the regulation other than adding to or changing the interlayer material. For the more stringent second tier of the regulation starting in 2016, tempered side windows and the rear window may need to become laminated in order to comply with the regulation. If the new laminated glass is the same thickness as, or even slightly thicker than, the tempered glass it replaces, it will actually lead to a weight savings, since millimeter per millimeter, laminated glazing is lighter than tempered glazing. If the performance-based option is used, the manufacturer may choose a variety of technologies (including the type of glass), so long as a performance standard is met. ARB envisions that the use of reflecting glass for the windshield will continue, but is uncertain whether reflective glass will be used all-around. As such, the effect of the regulation on window weight is likely to be negligible.

For More Information

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